

a1  
Concave

comprising a metal layer having a first surface comprising a plurality of voids, said voids having a dimension less than the wavelength of optical energy being processed.

---

On page 5, insert the following for the paragraph appearing at lines 25-31:✓

---

a2

According to diffraction theory, a sub-wavelength sized hole will not transmit light very effectively. However, the measured transmission efficiencies are of an order unity, whereby efficiency is defined as the ratio of fractional transmission to a real fraction of the holes. The propagating surface plasmon (SP) was associated with the higher than expected transmission of optical energy.

---

Insert the following for the paragraph appearing at page 6, line 29-page 7, line 6:✓

---

a3

The use of voids in metals is also relevant to the surface enhanced Raman scattering (SERS) effect. There is an important difference in local field effects depending on whether the excited material is adjacent a concave or a convex metal surface. At a convex metal surface, like a metal nanoparticle, the field lines diverge rapidly and the field drops off rather quickly (see Figure 1 hereto). At a concave surface, by contrast, the field will not drop off nearly so quickly and may stay constant or enhanced from a lensing effect. This is seen in a field of a dielectric sphere immersed in a uniform electric field, where the field inside the sphere is constant.

---

On page 14, insert the following for the paragraph appearing at lines 19-25:✓

---

a4

Various embodiments derived from the above description will be apparent to those skilled in the art, including modifications based on the above. All such variations and modifications are intended to fall within the spirit and scope of the present structure limited solely by the appended claims. All publication referred to herein are incorporated by reference.

---

### IN THE CLAIMS ✓

Please substitute the following rewritten version for Claims 1, 10-13, 15, 16, 18, 28 and 29 in this application under the provisions of 37 C.F.R. §1.121. A version of Claims 1, 10-13, 15, 16, 18, 28 and 29 with markings to show the changes made is attached hereto.